VINAR,O.; BASTECKY, J.; BOROVICKOVA, B.; ZICHOVA, M.; MALAC, V.

Method of delayed auditory feedback in psychiatry. Activ. nerv. sup. (Praha) 7 no.2:193-195 '65

1. Psychiatric Research Institute, Prague; Laboratory of Phonetics of the Institute of Czech Language of the Czechoslovak Academy of Sciences Research Institute c Electroacoustics.
2. O. Vinar's address:Praha 8, Bohnice 95.

L 29519-66

ACC NR: AP6020019 SOURCE CODE: CZ/0079/65/007/003/0302/0303

AUTHOR: Vinar, O. (Prague); Bastecky, J.; Borovickova, B.; Zichova, M.; Malac, V.

ORG: Psychiatric Research Institute; Laboratory of Phonetics, Institute of Czech Language, CSAV; Research Institute of Electroacoustics

TITLE: Delayed auditory feedback in schizophrenia[22] and LSD[22] induced state [This paper was presented at the 7th Annual Psychopharmacological Meeting, Jesenik, 20-23 January 1965.]

SOURCE: Activitas nervosa superior, v. 7, no. 3, 1965, 302-303

TOPIC TAGS: psychoneurotic disorder, behavior pattern, pharmacology

ABSTRACT: The authors tried to confirm a hypothesis that the disturbance induced by delayed auditory feedback is smaller in people who are more independent of exteroceptive signalization. 11 healthy subjects before and after administration of LSD and 13 schizophrenics were subjected to a series of tests. The results did not support the stated hypothesis. J. Noskova provided technical assistance. Orig. art. has: 1 figure and 1 table. [Orig. art. in Eng.] [JPRS]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 001 / OTH REF: 001

Card 1/1 JS

L 40190-66 T/EWP(1) IJP(c) BB/GG/JXT(bf)

ACC NR: AP5030056 SOURCE CODE: CZ/0039/65/026/007/0385/0390

AUTHOR: Borovickova, B.--Borovichkova, B. (Doctor; Candidate of sciences); Malac, V.--Malach, V. (Engineer) 42 B

ORG: [Borovickova] Institute of the Czech Language, CSAV, Prague (Ustav pro jazyk cesky CSAV); [Malac] Research and Development Institute of Electroacoustics, Prague (Vyzkumny a vyvojovy ustav elektroakustiky)

TITLE: Automatic identification of speech with a computer 16

SOURCE: Slaboproudy obzor, v. 26, no. 7, 1965, 385-390

TOPIC TAGS: computer, speech recognition, computer application

ABSTRACT: The introduction of the article explains the process of speech perception and states some experimental results. Then the possibility of automatic speech identification with a computer is discussed, and a definition is given of the relevant regions of the acoustical spectra of speech-sounds, together with a method for their determination and procedures for the automatic identification of speech by means of a computer, using either passive or active analysis. Orig. art. has: 5 figures. [Based on authors' Eng. abst.] [JPRS: 33,541]

SUB CODE: 09, 17 / SUBM DATE: 02Feb65 / ORIG REF: 005 / SOV REF: 001
OTH REF: 016

Card 1/1 UDC: 534.78

0918 0651

L 39882-66 EWT(m) JH/JG/JD/GD-2

ACC NR: AP6016129 (A) SOURCE CODE: UR/0289/66/000/001/0142/0143

AUTHOR: Borovik, G. R.

ORG: Chemical Technology Laboratory of the West Siberian Geological Administration, Novokuznetsk (Khimiko-tekhnologicheskaya laboratoriya Zapadno-Sibirskogo geologicheskogo upravleniya)

TITLE: Boron extraction with alcohol from magnesium chloride solutions

SOURCE: AN SSSR. Sibirskoye otdeleniya. Izvestiya. Seriya khimicheskikh nauk, no. 1, 1966, 142-143

TOPIC TAGS: boron, solvent extraction, chemical separation, boron extraction, magnesium chloride

ABSTRACT: A series of experiments were carried out to determine the effects of concentration of magnesium chloride solutions and of the nature of alcohol on extraction of boron. The experiments had a double purpose: purification of magnesium chloride solutions and utilization of the bottoms of alcohol production by oxo-synthesis. The optimum concentration of magnesium chloride solution was 31.0% in boron extraction with iso-amyl alcohol. Several other alcohols and the bottoms of alcohol manufacture also displayed a comparable extraction capability toward boron. The highest percentage of extraction (41.0% B_2O_3) was achieved with benzyl alcohol. The enhanced extraction

UDC: 546.27-145
542.61

Card 1/2

ACC NR: AP6016129

capability of benzyl alcohol in relation to acyclic alcohols indicated the existence of a correlation between extractive capability and chemical structure of alcohols. [JK]
Orig. art. has: 2 tables.

SUB CODE: 07/ SUBM DATE: 09Nov65/ ORIG REF: 003/ ATD PRESS: 4259

L 39746-66 EWT(m)/T/EWP(t) IJP(c) GD-2/JD

ACC NR: AP6005286 (N) SOURCE CODE: UR/0413/66/000/001/0030/0030

INVENTOR: Borovik, Ye. S.; Mamedov, M. Sh.; Volotskaya, V. G.

ORG: none

TITLE: Treatment of metallic parts. Class 18, No. 177443 [announced by the Physicotechnical Institute AN UkrSSR (Fizikotekhnicheskiy institut AN USSR)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 30

TOPIC TAGS: metal property, metal, heat treatment, cold treatment

ABSTRACT: An Author Certificate has been issued describing a method for treating metal parts, including cold treatment and heating to room temperature. To increase the strength and life of the parts, they are subjected to pulse loading with electric current in a constant magnetic field at below-zero temperatures, for example, at 20K. [LD]

SUB CODE: 11/ SUBM DATE: 20Jun64/

Card 1/1 UDC: 621.785.92
621.789

L 36050-66 EWT(d)/EWP(1) IJP(c) BB/GG
ACC NR: AT6017055 (N) SOURCE CODE: UR/2566/65/074/000/0085/0089

AUTHOR: Vershinskiy, N. V.; Borovikov, P. A.

ORG: none

TITLE: Design of stations with automatically controlled depth

SOURCE: AN SSSR. Institut okeanologii. Trudy, v. 74, 1965. Elektronnyye pribory dlya okeanologicheskikh issledovaniy (Electronic instruments for oceanological research), 85-89

TOPIC TAGS: measuring apparatus, oceanographic instrument

ABSTRACT: An automatic device for the continuous collection of oceanographic data is described. The device is based on a work by R. A. Zlotky ("A Concept for a Remotely Interrogated Synoptic Oceanographic Data Sampling Buoy," *Marine Sci. Instrumentation*, 1961, 1). The station consists of a signal buoy with a radar device and a signal light, a cable with an anchor at one end and a submerged lift buoy, and an instrument package which moves up and down the cable at programmed intervals. Data are stored in the memory of the measuring device and transmitted to a receiver when the device is near the ocean surface. The electric power required to move the package up and down the cable is calculated and a solution for a particular case is given. The design of a new electromechanical device with a considerably reduced power consumption is reported. Orig. art. has: 4 figures, 13 formulas.

SUB CODE: 08,14/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 003

Card 1/1 vmb

Borovikova, G.P.

AUTHOR: Borovikova, G.P., Korsunskiy, M.I. 48-10-16/20

TITLE: X-Ray Spectrum of the Germanium L-Series (Rentgenovskiy spektr L-serii germaniya)

PERIODICAL: Izvestiya AN SSSR Seriya Fizicheskaya, 1957, Vol. 21, Nr 10, pp. 1438-1444 (USSR)

ABSTRACT: The X-ray spectrum of the germanium-L-series was obtained by means of a tube of the Krasnikov type (Zavodskaya Laboratoriya, 1939, 4-5). The investigation of $L\beta_3$- and $L\beta_4$-lines in the germanium spectrum gave the following results: The microphotograph shows that the short-wave line is more intense than the longwave line. As the most intense with 9561X was assumed as $L\beta_3$ and that with the wavelength of 9620 X as $L\beta_4$ (on the strength of published data). The ratio of intensities at $L\beta_1$ and $L\beta_3$ $L\beta_4$ is difficult to determine and to be obtained only by re-calculating the intensity of the $L\beta_1$-line. The ratio $IL\beta_3 : IL\beta_1$ was found to be equal to 0.13. Herefrom it may be seen that the intensity of the L_3- and therefore also of the $L\beta_4$-line is very low. Furthermore, investigations were carried out

Card 1/3

in order to determine the presence of L_{III}-N_I, L_{II}-N_I and L_I-N_{II-III}-transitions in solid germanium. $L\alpha_{1,2}$ and $L\beta_1$-recordings were made at different conditions of excitation and exposure. The microphotograph shows that the double line is symmetric. It follows therefrom that the satellites are broader than the base lines. Such a strong intensity of $L\alpha_x$ and $L\beta_x$ justifies the statement that these lines cannot be satellites but that they are diagram lines. It was found that the ratio between the intensities of the satellites and those of the base lines depends in a considerable degree upon whether the sample was subjected to an electron bombardment or not. On the strength of all factors determined it may be said with justification that the line $L\alpha_x$ is the line $L\beta_6$, and that the $L\beta_x$-line is the $L\gamma_5$-line. As a result of the investigations carried out the hypothesis is set up that the lacking of the $L\beta_6$- and $L\gamma_5$-lines

in the elements of the Mn^{25} - Ge^{32} groups might be due to an oxidation process at the moment of the excitation of the spectrum. There are 6 figures, and 4 references, 2 of which are Slavic.

ASSOCIATION: Khar'kov Polytechnic Institute (Khar'kovskiy politekhnicheskiy institut)

AVAILABLE: Library of Congress

20-114-6-15/54

AUTHORS: Borovikova, G. P., Korsunskiy, M. I.

TITLE: The $L\beta_3$- and $L\beta_4$-Lines in the Spectrum of Germanium (Linii $L\beta_3$ i $L\beta_4$ v spektre germaniya)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 6, pp. 1192-1194 (USSR)

ABSTRACT: The present paper shall find the lines which correspond to the transitions $L_I \rightarrow M_{III}$ and $L_I \rightarrow M_{II}$, i. e. the lines $L\beta_3$ and $L\beta_4$. The wave lengths of these lines shall be measured and their intensity estimated.
The apparatus and the methods of investigation: The X-ray spectrum of germanium was obtained by means of a Krasnikov type tube. In the here described experiments the temperature of germanium remained below 50°C. The primary anode of the tube was covered by an aluminum plate. The main exciting radiation was the $K\alpha_1$, $K\alpha_2$-radiation of Al with the wave lengths 8321,37 and 8323,82 X. The entire focal spot participated in the production of the spectrum.
Measuring results: The possible value of the wave length of

The $L\beta_3$- and $L\beta_4$-Lines in the Spectrum of Germanium

the $L\beta_3$-line of germanium was determined by interpolation; thus 9570 X was found. In all images of this spectral range, under various conditions of excitation, two lines lying close to one another were found; their respective wave lengths are 9561 and 9620 X. The linear dispersion in this range amounted to 35,4 X/mm. The comparison of the here measured wave lengths with the known wave lengths of other elements showed that the here observed wave lengths belong to germanium. This is also confirmed by the high degree of purity of the here used germanium. The short-wave line is more intense than the long--wave one. The authors designated the most intense line with a wave length of 9561 X as the $L\beta_3$-line of germanium and the 9620 X-line as the $L\beta_4$-line of germanium. The relation of the intensities of the lines $L\beta_3$, $L\beta_4$ and $L\beta_1$ was only estimated by the authors by recalculating the intensity of the $L\beta_1$-line. There are 1 figure and 4 references, 1 of which is Slavic.

ASSOCIATION: Khar'kov State Polytechnical Institute imeni V. I. Lenin (Khar'kovskiy politekhnicheskiy institut im. V.I. Lenina)

PRESENTED: February 6, 1957, by G. V. Kurdyumov, Member of the Academy
SUBMITTED: February 5, 1957

BOROVIKOVA G.P.

20-1-19/54

AUTHOR: Borovikova, G.P., Korsunskiy, M.I.

TITLE: The Satellites of the $L\alpha_{1,2}$ and $L\beta_1$ Lines in the Spectrum of Germanium
(O sputnikakh liniy $L\alpha_{1,2}$ i $L\beta_1$ v spektre germaniya)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 115, Nr 1, pp. 75 - 77 (USSR)

ABSTRACT: The authors refer to a respective earlier work. They continue the study of the L-series of the spectrum of germanium in order to determine the existence of lines not observed hitherto, especially of the lines $L\beta_6$ (transition $L_{III} \rightarrow N_I$), $L\gamma_5$ (transition $L_{II} \rightarrow N_I$) and $L\gamma_{2,3}$ (transition $L_I \rightarrow N_{II-III}$). The experimental arrangement described by G.P. Borovikova and M.I. Korsunskiy, Doklady Akad. Nauk SSSR, 1957, Vol. 114, Nr 6 is used. The obtained x-ray spectra of the L-series of Ge within the range of wavelengths of from 10150 - 10400 X (which contains the lines $L\alpha_{1,2}$ (transition $L_{III} \rightarrow L_{IV-V}$) and $L\beta_1$ (transition $L_{II} \rightarrow M_{IV}$)) differ greatly from the spectra known from literature. On the pictures taken by the authors bright lines were observed on the short-wave part next to the lines $L\alpha_{1,2}$ and $L\beta_1$. A picture of this spectral range as well as a corresponding micro-

Card 1/2

20-1-19/54

The Satellites of the $L\alpha_{1,2}$ and $L\beta_1$ Lines in the Spectrum of Germanium

photogram are mentioned. The two-hump curve developed by the superposition of line $L\alpha_{1,2}$ and another unknown line is asymmetrical. The width of the unknown line $L\alpha_x$ is obviously greater than the width of $L\alpha_{1,2}$. The place of the lines $L\alpha_x$ and $L\beta_x$ observed by the authors might be identical with the place of the lines $L\beta_6$ (transition $L_{III} \rightarrow N_I$) and $L\gamma_5$ (transition $L_{II} \rightarrow N_I$). The authors assume that the satellites of the lines $L\alpha_{1,2}$ and $L\beta_1$, in Ge to be the lines $L\beta_6$ and $L\beta_5$. A further proof of this formulation resulted from the comparison of the spectra of the L-series of Ge and of GeO_2. The authors determined the wave-lengths of the lines $L\beta_1$, $L\beta_2$ and $L\gamma_5$. They also observed in the L-series of the Ge-spectrum a weak line with a wave-length of 8709 ± 5 X which, according to its position, corresponds to the line $L\gamma_{2,3}$ of Ge (transition $L_I \rightarrow N_{II-III}$). There are 4 figures, 1 table and 1 Russian reference.

ASSOCIATION: Khar'kov Polytechnical Institute im. V. I. Lenin (Khar'kovskiy politekhnicheskiy institut im. V.I. Lenina)

PRESENTED BY: G.V. Kudryumov, Academician, February 6, 1957
SUBMITTED: February 2, 1957
AVAILABLE: Library of Congress

Card 2/2

BOROVIKOVA, G.P.; KORSUNSKIY, M.I.

L-series spectrum of germanium. Issl.po zharopr.splav. 4: 140-146 '59. (MIRA 13:5)
(Germanium--Spectra)

SOV/48-23-5-6/31

24(7)

AUTHORS: Borovikova, G. P., Korsunskiy, M. I.

TITLE: Investigation of L-Series of Germanium (Issledovaniye L-serii germaniya). Influence of Impurities (Vliyaniye primesey)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 5, pp 564 - 568 (USSR)

ABSTRACT: The transition of matter into another physical or chemical state causes, as is known, a change of the electron state in the atoms, and these changes are revealed in the structure of the X-ray spectral lines. The comparison of the spectra shows that the spectrum change occurring in metallic germanium takes place, as if the sample surface were oxidized. In the investigations under review, the intensity of the lines was measured with a microphotometer. The classical dispersion curve formula is then written down, and a diagram shows the measured intensities of the L-lines as well as their splitting up into individual maxima. Table 1 summarizes the half widths of the individual maxima, and table 2 the interval between the maxima (both in ev). The intensity of all lines is computed with the abovementioned formula. Germanium rectifiers are investigated

Card 1/2

Investigation of L-Series of Germanium. Influence of Impurities

SOV/48-23-5-6/31

next, and their frontal and lateral spectra are shown in two diagrams. Finally, the influence of small iron impurities (0.002%-0.05%) on form and position of maxima is investigated, and results are summarized in four tables. Special samples serving for these investigations were prepared by the Institut poluprovodnikov AN USSR (Institute of Semiconductors AS UkrSSR) and gratitude is expressed to V. Ye. Lashkarev. There are 3 figures, 10 tables, and 3 Soviet references.

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut im. V. I. Lenina (Khar'kov Polytechnic Institute imeni V. I. Lenin)

Card 2/2

POKOVIKOVA, G.P., Cand Phys-Math Sci (diss) "Investigation of the L-series of the roentgen spectrum of germanium." Khar'kov, 1960, 15 pp (Khar'kov Polytechnical Institute im V. I. Lenin) (KL, 34-60, 119)

KORSUNSKIY, M.I. [Korsuns'kyi, M.I.]; BOROVIKOVA, G.P. [Borovykova, H.P.]

Effect of small admixtures of antimony on the L-series X-ray spectrum of germanium. Ukr. fiz. zhur. 5 no.1:88-93 Ja-F '60. (MIRA 14:6)

1. Khar'kov, Politekhnicheskiy institut im. V.I. Lenina.
(Spectrum, X-ray)
(Germanium--Spectra)

KORSUNSKIY, M.I.; LITVINOVA, L.B.; BOROVIKOVA, G.P.

Influence of small amounts of gallium on the position of the $L_{\alpha 1,2}$ and $L_{\beta 6}$ emission lines of germanium. Fiz. tver. tela 3 no.1:282-285 Ja '61. (MIRA 14:3)

1. Khar'kovskiy politekhnicheskiy institut im.V.I.Lenina.
(Germanium—Spectra)

S/849/62/000/000/006/016
A006/A101

AUTHORS: Borovikova, G. P., Korsunskiy, M. I.

TITLE: On the effect of micro-admixtures upon the X-ray emission spectrum of germanium L-series

SOURCE: Vysokotemperaturnyye metallokeramicheskiye materialy. Inst. metalloker. i spets. spl. AN Ukr.SSR. Kiev, Izd-vo AN Ukr.SSR, 1962, 40 - 45

TEXT: The authors studied the effect of admixtures in amounts as low as 10^{-3} to 10^{-2} at.% upon the X-ray spectrum of Ge L-series using specimens with proportioned admixture content. Experiments were made with one pure Ge specimen (admixture amount below 10^{13} cm^{-3}) and four Ge specimens with different amounts of antimony. The concentration of the antimony admixtures varied within $5.6 \cdot 10^{17}$ - $4.8 \cdot 10^{18}$ cm^{-3}. The authors studied the correlation between the displacements of spectral lines L_{β_6} and L_{γ_5} in respect to lines $L_{\alpha_{1,2}}$ and L_{β_1} respectively, (as established in a previous investigation) and the concentration of antimony admixtures in germanium. The experiments were carried out on a

Card 1/2

On the effect of micro-admixtures upon...

high-vacuum high-intensity X-ray spectrograph with a curved mica crystal, using a mixed method of exciting the X-ray spectra. The addition of 10^{-3} to 10^{-2} at.% antimony to single-crystal germanium was found to cause the displacement of spectral lines L_{β_6} in respect to $L_{\alpha_{1,2}}$ and of lines L_{γ_5} in respect to L_{β_1} of germanium toward the short wavelength side by 1 - 2 ev. The magnitude of displacement $\Delta E_{\beta_6-\alpha_{1,2}}$ is proportional to the cube root of the concentration of admixture atoms. It was observed that the wavelength of lines $L_{\alpha_{1,2}}$ and L_{β} of germanium with antimony decreased as a result of the displacement of $M_{IV,V}$ levels in respect to L_{III} and L_{II} levels. This displacement is approximately five times less than that of level N, in respect to $M_{IV,V}$ levels. The authors thank V. Ye. Lashkarev and Ye. G. Miselyuk for the specimens made available. There are 2 tables and 2 figures.

Card 2/2

L 31936-66 EWT(1)/FCC JXT(CZ)/GW

ACC NR: AT6016433 (N) SOURCE CODE: UR/2648/65/000/021/0016/0033

AUTHOR: Borovikova, L. N.

ORG: none

TITLE: Fundamental results of statistical analysis of ice phenomenona in the Amu-Dar'ya River

SOURCE: Tashkent. Sredneaziatskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut. Trudy, no. 21(36), 1965. voprosy gidrologii (Problems in hydrology), 16-33

TOPIC TAGS: river, ice, hydrology, statistical analysis

ABSTRACT: The article deals with statistical investigations of ice phenomena in the Amu-Dar'ya River. The results of several years of observations on the ice evolution in the Amu-Dar'ya River from the city of Termez to the river's mouth are given. Orig. art. has: 2 figures nad 12 talbes. [Based on author's abstract] [NT]

SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 007

Card 1/1

GERR, Feliks Grigor'yevich; KONSTANTINOV, Boris Vasil'yevich, nauchn. red.; BOROVIKOVA, N., red.

[Shallow, reinforced concrete wells with porous concrete filters] Shakhtnye zhelezobetonnye kolodtsy s fil'trami iz poristogo betona. Alma-Ata, Kazsel'khozgiz, 1963. 11 p. (MIRA 17:10)

5(3) SOV/79-29-8-20/81

AUTHORS: Bal'yan, Kh. V., Borovikova, N. A.

TITLE: Hydrogenation of Unsaturated Compounds in the Presence of Colloidal Palladium. XI. Hydrogenation of Vinyl Acetylene

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 8, pp 2553-2557 (USSR)

ABSTRACT: As the selective hydrogenation of vinyl acetylene into the divinyl is of great practical importance, the authors investigated the influence exerted by different additions upon the composition of the hydrogenation products of the hydrocarbon mentioned, in the presence of colloidal palladium. The essential disadvantage of the hydrogenation experiments hitherto carried out for vinyl acetylene (Refs 2-5,9) with different catalysts, also with colloidal palladium which was first used by S. V. Lebedev, is due to the great losses of gases (up to 44%) on their escape from the hydrogenation device. Therefore, the authors devised such experimental conditions under which these losses were considerably reduced; conditions under which the molar ratio between vinyl acetylene and hydrogen was below the ratio 1:1. The gas mixture collected was quantitatively analyzed with respect to vinyl acetylene, divinyl and butylene.

Hydrogenation of Unsaturated Compounds in the Presence of Colloidal Palladium. XI. Hydrogenation of Vinyl Acetylene

The molar ratios between vinyl acetylene and hydrogen in the hydrogenation were 1:1, 1:0.75, 1:0.5. The following additions were used in different quantities: lead and copper acetate, n-thiocyano-chloro-benzene, pyridine, quinoline, aniline, and diethylamine. According to table 1, lead acetate was the most active of all additions, especially at a hydrogenation ratio of 1:1, both with respect to the increased yield of divinyl and the decreased quantity of butylenes. As to the activity and retardation of the reaction, it was followed by copper acetate (Tables 1,2,3). The influence of the n-thiocyano-chloro-benzene mainly became manifest in a decreased yield of butylenes which fact is also of positive value. The organic bases were added in considerably higher quantities; they gave lower yields of the end product. Aniline exerted a positive effect only at a hydrogenation ratio of 1:1, diethylamine and pyridine were negative. There are 4 tables and 9 references, 8 of which are Soviet.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta

SOV/79-29-8-20/81

Hydrogenation of Unsaturated Compounds in the Presence of Colloidal Palladium. XI. Hydrogenation of Vinyl Acetylene

(Leningrad Technological Institute imeni Lensovet)

SUBMITTED: July 19, 1958

Card 3/3

SOV/79-29-8-21/81

5(3)

AUTHORS: Bal'yan, Kh. V., Borovikova, N. A.

TITLE: Hydrogenation of Unsaturated Compounds in the Presence of Colloidal Palladium. XII. Hydrogenation of Alkyl Acetylenes and Phenyl Acetylene

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 8, pp 2557-2560 (USSR)

ABSTRACT: In addition to the papers of references 1-5, the authors investigated under the same conditions the hydrogenation of the monosubstituted acetylene hydrocarbons which have alkyl and aryl radicals, on colloidal palladium. They used for this purpose hexyne-1, heptyne-1, octyne-1 and phenyl acetylene. All these hydrocarbons were shown to add the first two hydrogen atoms with nearly constant rate which abruptly increases afterwards and then drops again, as can be seen in the figure. The hydrogenation curves of the alkyl acetylenes are very similar to those of the alkenyl acetylenes (Ref 5). These observations correspond, to a certain extent, with those of the other authors, Yu. S. Zal'kind et al (Refs 6-9). The alkyl acetylenes add the first hydrogen molecule in a strictly selective way. The

samples which were directly taken from the reaction mass did not react with silver oxide; the separated and purified hydrogenation products did not indicate an acetylene bond according to the infrared spectrum which was taken and assigned by T. V. Yakovleva. The bromide-bromate method gave a yield of 95-98% of compounds with a double bond. As to the physical constants, the resultant hydrocarbons correspond with the corresponding olefins. In the infrared spectra of the hydrogenation products, the characteristic frequencies of the vinyl group were detected, as was expected. According to the investigations of the authors, the separated product of the above-mentioned reaction did not contain any acetylene bond which was confirmed by spectrum analysis and by means of the bromide-bromate method (79.7% compounds with a double bond!). It was thus shown that the monosubstituted acetylene hydrocarbons with alkyl and phenyl radicals add the hydrogen to the triple bond on colloidal palladium in a strictly selective manner. There are 1 figure, 3 tables, and 11 references, 9 of which are Soviet.

SOV/79-29-8-21/81

Hydrogenation of Unsaturated Compounds in the Presence of Colloidal Palladium. XII. Hydrogenation of Alkyl Acetylenes and Phenyl Acetylene

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet)

SUBMITTED: July 19, 1958

Card 3/3

5(3) SOV/79-29-9-16/76

AUTHORS: Bal'yan, Kh. V., Borovikova, N. A.

TITLE: Hydrogenation of Unsaturated Compounds in the Presence of Colloidal Palladium. XIII. Hydrogenation of Carbocyclic Enin Hydrocarbons

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 9, pp 2882-2889 (USSR)

ABSTRACT: In their previous reports, the authors described the results obtained from the hydrogenation of vinyl acetylene, of alkyl- and phenyl acetylene (Ref 1) as well as of vinyl-alkyl- and alkenyl acetylenes (Ref 2). The present investigations were extended to the hydrogenation of the hydrocarbons of the carbocyclic series with a conjugate enin system on colloidal palladium. For this purpose, 1-ethinyl cyclopentene-1(I), 1-ethinyl cyclohexene-1(II), 1-phenyl buten-3-in-1(III), 4-phenyl buten-3-in-1(IV) were hydrogenated on colloidal palladium. The hydrocarbons under investigation having an acetylene group in terminal position are exclusively hydrogenated on the triple bond. Hydrogenation of 1-phenylbuten-3-in-1, which is a double-substituted acetylene, likewise begins on the triple bond, under formation of a diene hydrocarbon, which is then, however, partially hydrogenated into an olefin.

Card 1/3

Hydrogenation of Unsaturated Compounds in the Presence of Colloidal Palladium. XIII. Hydrogenation of Carbocyclic Enin Hydrocarbons

Finally, the hydrogenation of 1-phenylbuten-3-in-1 results in a mixture of the initial products, of diene and olefin. The hydrogenation rate of hydrocarbons with an acetylene group in terminal position rises abruptly after the addition of the first two hydrogen atoms, and then drops again. The addition rate of hydrogen on the carbon 1-phenylbuten-3-in-1, however, drops gradually. Thus, carbocyclic enin hydrocarbons are exclusively hydrogenated on the triple bond over colloidal palladium, under formation of a hydrocarbon with conjugate double bonds. The authors thank T. V. Yakovleva for assistance given in the analysis of the infrared spectra. There are 5 figures, 3 tables, and 18 references, 10 of which are Soviet.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Institute of Technology imeni Lensovet)

SOV/79-29-9-16/76

Hydrogenation of Unsaturated Compounds in the Presence of Colloidal Palladium. XIII. Hydrogenation of Carbocyclic Enin Hydrocarbons

SUBMITTED: July 19, 1958

Card 3/3

BOROVIKOVA, N. A., Cand Chem Sci (diss) -- "The hydrogenation of unsaturated hydrocarbons in the presence of colloidal palladium". Leningrad, 1960. 13 pp (Min Higher and Inter Spec Educ RSFSR, Leningrad Order of Labor Red Banner Tech Inst im Leningrad Soviet), 200 copies (KL, No 14, 1960, 127)

S/079/60/030/010/015/030
B001/B066

AUTHORS: Bal'yan, Kh. V., Petrov, A. A., Borovikova, N. A., Kormer, V. A. and Yakovleva, T. V.

TITLE: Hydrogenation of Unsaturated Compounds in the Presence of Colloidal Palladium. XIV. Some Peculiarities of the Hydrogenation of Bisubstituted Allene Hydrocarbons

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 10, pp. 3247 - 3253

TEXT: There are only few data available in publications concerning special cases of the hydrogenation of seven bisubstituted allenes (Table). In the present paper, the authors study some rules governing the hydrogenation of the following bisubstituted allene hydrocarbons: octadiene-3,4; nonadiene-3,4; decadiene-3,4; 7-methyl octadiene-2,3; 7-methyl octadiene-3,4; 6,6-dimethyl heptadiene-2,3; and 7,7-dimethyl octadiene-3,4. It was found that the first hydrogen mole is usually added at an increasing rate, after which hydrogenation slows down considerably (Diagram 1). In hydrocarbons of isostructure this rule

manifests itself still more distinctly. The hydrogenation of allenes takes place selectively, and, when taking up half of the calculated hydrogen quantity, a mixture of olefins with a double bond in position 2-, 3-, or 4- is formed. Allene hydrocarbon reacts completely in this case. Alkenyl allenes (octatriene-1,3,4; decatriene-1,3,4; 2-methyl octatriene-1,3,4; 8-methyl nonatriene-1,3,4) are hydrogenated in the same way: After taking up about 2 moles of hydrogen, the reaction rate decreases rapidly. Allenes and hydrocarbons having a double bond in the end position disappear completely or to a considerable extent after taking up the first hydrogen mole. The infrared spectra of the hydrogenation products of allenes with 50% of the hydrogen quantity are not indicative of allene compounds (Diagram 2). Diagram 1 does not show any characteristic differences of the hydrogenation rates of 2,3- and 3,6-dienes. Diagram 3 shows curves for the hydrogenation rates of alkenyl allenes; Diagram 4 shows the infrared spectra of the hydrogenation products of alkenyl allenes in a hydrocarbon/hydrogen ratio of 1:1.

Hydrogenation of Unsaturated Compounds in the Presence of Colloidal Palladium. XIV. Some Peculiarities of the Hydrogenation of Bisubstituted Allene Hydrocarbons

S/079/60/030/010/015/030
B001/B066

The investigation results thus indicate that the hydrogenation of bisubstituted allenes takes place selectively, and is similar to the hydrogenation of acetylenes having the acetylene group in the end position. In the case of alkenyl allenes, the direction of hydrogenation depends to a certain extent on the hydrocarbon structure. There are 4 figures, 2 tables, and 9 Soviet references.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institute imeni Lensovet)

SUBMITTED: October 25, 1959

Card 3/3

BOROVIKOVA, N. A.

3

18.8310
15.9202

26938

S/138/61/000/005/001/006
A051/A129

AUTHORS: Klebanskiy, A. L., Tsukerman, N. Ya., Kartsev, V. N., Labutin, A. L., Tronko, Yu. V., Mal'shina, L. P., Borovikova, N. A., Karelina, G. G., Rozhkov, Yu. P.

TITLE: A new type of chloroprene rubber: liquid nairite
(This work was awarded the second prize at the VKhO im. D. I. Mendeleyev competitions in 1959)

PERIODICAL: Kauchuk i rezina, no. 5, 1961, 1 - 5

TEXT: The high chemical stability, the gasoline-petroleum stability and ozone-resistance of chloroprene rubber makes it a suitable material for anti-corrosion coating and hermetic sealing. However, the difficulty of producing highly-concentrated solutions based on commercial nairite limited the application of the latter in anti-corrosion technique. It has been assumed that the use of low-molecular polymers for this purpose would enable one to obtain low-viscous, highly-concentrated solutions satisfying the anti-corrosion techniques. One of the methods for producing low-molecular polymers is the use of the polymerization of increased concentrations of regulator-compounds able to break the chains and to form new ac-

Card 1/6

26988 S/138/61/000/005/001/006
A new type of chloroprene rubber: liquid nairite A051/A129

tive centers. Sulfurous compounds, such as mercaptane, thioacids, xanthogenesulfides, are widely used as regulators. When studying the action of n-tetradecylmercaptane, diisopropylxanthogenedisulfide and bisethylxanthogenedisulfide during the process of polymerization of chloroprene, it was established that with an increase in the concentration of the regulator the molecular weight of the polymer drops correspondingly and the plasticity of the rubber increases. It was assumed that the use of greater quantities of bisethylxanthogenedisulfide in the polymerization of chloroprene in emulsion decreases the molecular weight of the polymer and yields low-viscosity solutions of rubber. An attempt was made to produce low-molecular polychloroprene by polymerization of chloroprene in the presence of sulfur with subsequent destruction of the polymer. It was shown that the action of sulfur differs from that of other regulators. The effect of sulfur on the polymers of chloroprene is shown by the scheme: $-(CH_2-CCl=CH-CH_2)_n-S_x-(CH_2-CCl=CH-CH_2)_n-S_x$, where x=2-6. The sulfur forms linear bonds in the polymer chain. With an increase in the bound sulfur content in the polymer the molecular weight of the polymer decreases in the subsequent interaction with thiuram from 600,000 to 280,000 with 0.3% of bound sulfur and from 300,000 to 43,000 with 1% of bound sulfur. The quantity of reacted thiuram increases respectively. The destruction scheme is given as follows: 1) The formation of free radicals under the effect of the thermal action of thiuram:

26988 S/138/61/000/005/001/006
A051/A129

A new type of chloroprene rubber: liquid nairite

$-(CH_2-CCl=CH-CH_2)_n-S-S-S-S-(CH_2-CCl=CH-CH_2)_m-S-S-S-S- \rightarrow -(CH_2-CCl=CH-CH_2)_n-S;$

2) Recombination of the polymer radical with molecular thiuram and splitting off of the latter along the -S-S-bond:

$$-(CH_2-CCl=CH-CH_2)_n-S\cdot + (C_2H_5)_2N-\overset{\overset{S}{\|}}{C}-S-S-\overset{\overset{S}{\|}}{C}-N(C_2H_5)_2 \rightarrow$$

$$\rightarrow -(CH_2-CCl=CH-CH_2)_n-S-S-\overset{\overset{S}{\|}}{C}-N(C_2H_5)_2 + (C_2H_5)_2N-\overset{\overset{S}{\|}}{C}-S\cdot$$

Based on the outlined assumptions of the mechanism of the sulfur action during the process of chloroprene polymerization and destruction of the polymer under the effect of the chemical masticating substances, the conditions for producing low-molecular chloroprene rubber-"liquid" nairite were developed. The liquid types of nairite can be obtained on a typical apparatus. The sulfur can be introduced in the form of solutions in mineral oils as well as aqueous dispersions obtained in the presence of emulsifiers and protective colloids. It was shown by V. N. Kartsev, M. A. Gutman, G. G. Karelina, F. Ye. Berman, Ye. G. Malinovskaya, M. B. Shur at VNIISK, no. 2389, 1951, that for mastication the most effective system is mercapto-

Card 3/6

3

26988 S/138/61/000/005/001/006
A new type of chloroprene rubber: liquid nairite A051/A129

benzothiazol (captax)-diphenylguanidine (DPhG). To increase the activity of these agents, tetramethylthiuramdisulfide was added (thiuram D) or tetramethylthiuramdisulfide (thiuram E). Literature data indicate that active masticating agents of polychloroprene are the piperidine salt of hexamethylenedithiocarbamine acid or ammonium hexamethylenedithiocarbamate. The order of introduction of the agents plays an important role. The effect of the type and composition of the carbon black on the solubility of the rubber mixtures from "liquid" nairite was investigated. Only the thermal carbon black helps to retain complete solubility. Higher indices of relative elongation when filling with 100 w.p. and over are achieved with thermal carbon black. The composition and technology for preparing the rubber mixtures based on the "liquid" nairite with thermal carbon black as filler yielded highly-concentrated solutions (70 - 75%). These solutions are suitable for sealing various equipment by the same methods which are used in the case of dye and varnish coatings. Tests of coatings made of liquid nairite in experimental and natural samples in various industrial fields showed the expediency of using this product as a material for protecting the metal from corrosion, erosion, cavitation and also as a material for hermetic sealing. There are 4 tables and 21 references: 2 Soviet-bloc, 19 non-Soviet-bloc. The references to the 4 most recent

Card 4/6

3

26988 S/138/61/000/005/001/006
A new type of chloroprene rubber: liquid nairite A051/A129

English-language publications read as follows: Corros. Technol., 5, no. 4, 107 (1958); R. B. Seymour a. oth., Plastics for Corrosion Resistant Application, N.Y., 1955, 90; Rubb. a. Plast. Age, 39, no. 8, 684 (1958); Corros. Technol., 3, no. 3, 89 (1956).

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva (All-Union Scientific Research Institute of Synthetic Rubber im. S. V. Lebedev)

X

Card 5/6

27514
S/138/61/000/005/002/006
A051/A129

18.9201

AUTHORS: Labutin, A. L., Klobanskiy, A. L., Tsukerman, N. Ya., Kartsev, V. N., Trenke, Yu. V., Mal'shina, L. P., Borovikova, N. A., Karolina, G. G., Rozhkov, Yu. P.

TITLE: "Liquid nairite" - a new material for rubberizing

PERIODICAL: Kauchuk i rezina, no. 6, 1961, 5 - 8

TEXT: The authors state that in the chemical destruction of "liquid" nairite, highly concentrated solutions can be produced which are applicable as a material for rubberizing. In the USSR a safer binary solvent, consisting of 2 weight parts of ethylacetate and 1 w.p. of gasoline is used in nairite adhesives. Experiments showed, however, that this solvent in "liquid" nairite is not suitable for many technical reasons. Better results were obtained in using a ternary solvent consisting of 76% solvent, 19% turpentine and 5% n-butanol. The latter component does not dissolve the nairite, but facilitates the use of the brush for painting and good coating distribution. It was noted that film vulcanization from liquid nairite at 20°C does not show positive results. Thus various forms of thermal vulcanization were investigated: vulcanization with heated air, live vapor, hot water

Card 1/6

4

27544
S/138/61/000/005/002/006
A051/A129

"Liquid nairite" - a new material for rubberizing

and infra-red irradiation. It was established that the most suitable method was vulcanization by hot air. The physico-mechanical indices of nairite coatings vulcanized in air at various temperatures are given in Fig. 1. Fig. 2 shows the relationship between the temperature and duration of the vulcanization. The most suitable temperatures of vulcanization in air are within the range of 100 - 142°C. It was noted that the liquid nairite coatings did not possess the proper adhesion to metal. Thus certain other adhesives or coatings ensuring better adhesion between metal and coating were sought. The best results were obtained with the following three materials: standard leuconate (organic base: n, n', n" - triisocyanate-triphenylmethane), chloronairite adhesive (organic base: chloronairite and nairite) and a primer, tentatively called epoxide primer (organic base: epoxide resin, chloronairite and nairite). The chemical stability and anti-corrosion properties of the vulcanized nairite coatings were studied. The conclusion was drawn that 1.2-mm nairite coatings in combination with a water-resistant coating applied three times can reliably protect metals from corrosion due to aqueous solutions of many acids, alkali and salts. The coatings were not resistant to the action of oxidizing agents, aromatic and halided solvents. Rubber coatings differ from varnish and plastic coatings by an increased resistance to abrasive wear. An attempt was made

Card 2/6

27544
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A051/A129

"Liquid nairite" - a new material for rubberizing

to determine the resistance of nairite coatings under conditions of dry friction using the Grosselli-type machine. It is concluded that coatings of so-called crystallizing liquid nairite obtained in low-temperature polymerization are superior to other rubbers in their wear-resistance, excepting vulcollane, which has a unique resistance to abrasive wear. It was established that coatings of liquid oil nairite are superior to coatings of bakelite, polyethylene and caprone, when tested in rapidly flowing sea water. Tests have further shown that liquid nairite as a material for coatings will become widely used in industry in the next few years. At present tests are being conducted in the North Sea and the Atlantic Ocean on propellers of fishing trawlers coated with liquid nairite for protection from corrosion, erosion and cavitation. Mechanical plants are testing steel covers of refrigerators and condensators coated with nairite. These were previously manufactured from non-ferrous metals. Certain chemical plants have installed diaphragm valves, the interior of which is covered with liquid nairite to prevent corrosion from acid solutions, alkali and salts. The possibility of using nairite coatings in various instruments as a means for preventing spark formation in percussion has also been revealed. Finally, it was established that these coatings can be used in certain constructions for hermetic sealing. At the Moscow TETs NO 12 a vacuum-condensator of a mass-produced 50 thousand kw steam turbine withstood a

Card 3/6

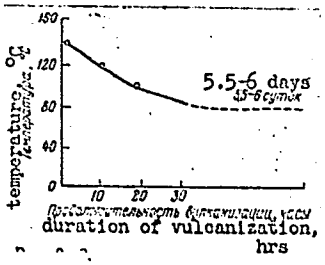
27544
S/138/61/000/005/002/006
A051/A129

"Liquid nairite" - a new material for rubberizing

testing period of one and a half years with the brass pipes and steel pipe boards coated with liquid nairite. K. S. Shmurey, O. P. Abolina, A. I. Konstantinova and G. A. Selivanovskaya took part in the work. There are 2 tables and 2 sets of graphs.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedova (All-Union Scientific Research Institute of Synthetic Rubber im. S. V. Lebedev)

Fig. 2. Dependence of the vulcanization duration of the coatings made of liquid nairite on the temperature



Card 4/6

BOROVIKOVA, N.N.

Sugar-frosted corn flakes, a new product. Kons.i ov.prom. 15 no.11:19-20 N '60. (MIRA 13:10)

1. Moskovskiy ordena Lenina pishchevoy kombinat imeni Mikoyana.
(Corn products)

BOROVIKOVA, N.N.; MYAGKOVA, R.Ya.

Production technology of canned "Liver puree with rice."
Kons.i ov.prom. 18 no.5:23 My '63. (MIRA 16:4)

1. Moskovskiy ordena Lenina pishchevoy kombinat.
(Canning and preserving)

KRETOVICH, V.L., BUNDEL', A.A., FRASHERI, M.P., BOROVIKOVA, H.V.

Competitive inhibition of transamination in plants by hydroxylamine.
Zhur.ob. biol. 19 no.5:414-416 S-O '58 (MIRA 11:10)

1. Institut biokhimii imeni A.N. Bakha AN SSSR.
(PLANTS, EFFECT OF HYDROXYLAMINE ON)
(GLUTAMIC ACID)
(SERINE)

17(3)

AUTHORS: Kretovich, V. L., Bundel', A. A., Frasheri, M. R., Borovikova, N. V. SOV/20-122-6-30/49

TITLE: On the Participation of Hydroxylamine in the Synthesis of Amino Acids in Plants (Ob uchastii gidroksilamina v sinteze aminokislot v rasteniyakh)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 6, pp 1065 - 1067 (USSR)

ABSTRACT: Already in 1884 (Ref 2) and in 1937 (Ref 1), respectively, the opinion was expressed that plants during the assimilation of nitrates form hydroxylamine which in consequence of a later reaction with carbonyl compounds forms oximes. According to this hypothesis oximes are changed by reduction into corresponding amino acids. Thus hydroxylamine together with ammonia, which in theoretical constructions is used as an inorganic initial compound in the synthesis of amino acids, have become important substances. In spite of previous papers dealing with the subject (Refs 3 - 7) the actual participation of hydroxylamine in the synthesis of amino acid by plants has never been demonstrated by experiment. It was even ascertained that hydroxylamine as an intense

Card 1/3

intercellular toxin (kletochnyy yad) delays several processes, especially the reaction of the fermentative transamination (Ref 8). It is quite obvious that the problem of the participation of hydroxylamine investigated has to be discussed mainly with respect to the concentrations applied. The present paper aimed at investigating the participation of hydroxylamine in the synthesis of amino acid in the pulp and extracts of plant tissues. Small leaves of 10 - 12 days old wheat-seedlings and of 20 - 24 days old pumpkin-seedlings were used for this purpose. Table 1 shows the results of the experiments for the explanation of the influence exercised by hydroxylamine upon the synthesis of serine and glutaminic acid in the pumpkin-seedlings. It can be seen from table 1 that in the pulp of small leaves in the presence of hydroxylamine an intense synthesis of the serine and a distinctly marked synthesis of the glutaminic acid take place. In the pulp of wheat-seedlings the synthesis of both amino acids in question could be ascertained. However, the increase in the content of these acids in wheat and in pumpkin was different. It is difficult to explain the cause of this difference.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206520001-5"

On the Participation of Hydroxylamine in the Synthesis of Amino Acids in Plants

SOV/20-122-6-30/49

Finally, assumptions on the mechanism of the syntheses discussed are expressed. There are 1 table and 14 references, 4 of which are Soviet.

ASSOCIATION: Institut biokhimii im. A. N. Bakha Akademii nauk SSSR (Institute of Biochemistry imeni A. N. Bakh of the Academy of Sciences, USSR)

PRESENTED: July 1, 1958, by A. I. Oparin, Academician

SUBMITTED: June 30, 1958

Card 3/3

KRETOVICH, V.L.; BUNDEL', A.A.; KRASHERI, M.R.; BOROVIKOVA, N.V.

Effect of hydroxylamine on the growth of wheat. Fiziol.rast. 7 no.3:261-268 '60. (MIRA 13:6)

1. A.N. Bakh Institute of Biochemistry, U.S.S.R., Academy of Sciences, Moscow. (Plants, Effect of hydroxylamine on)

BUNDEL', A.A.; KRETOVICH, V.L.; BOROVIKOVA, N.V.

Incorporation of N^{15}-hydroxylamine into the proteins of wheat sprouts. Fiziol. rast. 11 no.1:31-37 Ja-F '64.
(MIRA 17:2)

1. Institut biokhimii imeni Bakha AN SSSR, Moskva.

Borovikova, O. N.

5

Biochemistry of experimental gastritis in light of cortico-visceral connections. V. M. Vasyutochkin, A. V. Drobintsava, O. N. Borovikova, Z. N. Lebedeva, and O. A. Goryacheva. *Fiziol. Zhur. S.S.S.R.* 42, 192–202(1956).—Exptl. gastritis in cats lowers the reducing and oxidizing ability of the mucous membranes of the stomach (tests with decolorization of methylene blue and with formation of indophenol blue); acid phosphatase also declines as do free and bound vitamin B_1 and nicotinic acid. In normal animals carbocholine enhances the anoxidative link in cell respiration of the gastric lining, while adrenaline or sympatol has no effect. Block of parasympathetic innervation with atropine represses cellular respiration (mainly the aerobic part), while sympatolitin, which blocks the sympathetic innervation, causes an increase in the aerobic respiration. Both of these drugs repress considerably the biochem. shifts listed above in exptl. gastritis. Group B vitamins greatly increase the vol. and acidity of gastric juice, and restore the oxidation-reduction reactions of gastric lining.

G. M. Kosolapoff

BOROVIKOVA, O.N., PELISHENKO, I.A., RUDAKOV, V.V., (USSR)

"Effect of Bone Marrow Heterotrasnplants of Biochemical Processes in Haemopoietic Organs in Acute Radiation Sickness."

Report presented at the 5th Int'l. Biochemistry Congress, Moscow, 10-16 Aug 1961.

ACCESSION NR: AP4025117 S/0020/64/155/003/0683/0684

AUTHORS: Ivanov, I.I.; Borovikova, O.N.; Vladimirov, V.G.; Dolgo-Saburov, V.B.; Sharobayko, V.I.

TITLE: On the mechanism of reduction of the DNA level in body tissues exposed to ionizing radiation

SOURCE: AN SSR. Doklady*, v.155, no.3, 1964, 683-684

TOPIC TAGS: nucleus DNA, DNA tissue level, X ray irradiation, lymphocyte, spleen lymphocyte, DNA destruction, acridine orange stain, ultra violet green fluorescence, ultra violet red fluorescence

ABSTRACT: Earlier determination of DNA reduction in the cell nuclei of mammal tissues (ultra violet cytospectrometry) gave only an average DNA content in the cell, without taking account of its functional state. The authors contend that the observed reduction is due to the lower DNA content in cells which are dying or have died following irradiation. They studied difference in functional condition, as related to DNA contents in spleen lymphocytes of 19 white rats one day before and after whole body X-ray irradiation with a 300 roentgen dose.

Card 1/2

ACCESSION NR: AP4025117

The ultra violet and other equipment are described. Staining with acridine-orange afforded cell differentiation according to the functional state, without impairing the reliability of quantitative DNA determination. Uninjured cells retained green fluorescence while that of the injured cells was red. The ultra violet technique of separate DNA determination in these cells is described. Nucleic acids were not isolated, since the small RNA content could be neglected in this case. DNA nucleus concentration in the cells with green fluorescence was almost the same for irradiated and non-irradiated lymphocytes ($6.49 \cdot 10^{-12}$ and $6.23 \cdot 10^{-12}$g resp.) while that of cells with red fluorescence was considerably lower ($1.81 \cdot 10^{-12}$g). This points towards death with depolymerization and decomposition of the latter's DNA. Orig. art. has 1 table.

ASSOCIATION: Boenno-meditsinskaya akademiya im. S.M. Kirova (Military Medical Academy)

SUBMITTED: 11Sep63 DATE ACQ: 17Apr64 ENCL: 00

SUB CODE: CH, NS NR REF SOV: 007 OTHER: 002

Card 2/2

IVANOV, I.I.; BOROVIKOVA, O.N.; VLADIMIROV, V.G.; DOLGO SABUROV, V.B. SHAROBAYKO, V.I.

Mechanism of DNA level reduction in issues after the exposure of the organism to ionizing radiation. Dokl. AN SSSR 155 no. 3: 683-684 Mr '64. (MIRA 17:5)

1. Voyenno-meditsinskaya akademiya im. S.M.Kirova. Predstavleno akademikom A.N.Belozerskim.

PLYUGACHEV, Vitaliy Kuz'mich, kand. tekhn. nauk; SAZONOV, N.A., akademik, red.; BORODVIKOVA, R., red.; DIK, V., tekhn. red.

[Principles of an efficient power supply system for agriculture] Osnovy ratsional'nogo elektrosnabzheniia sel'skogo khoziaistva. Pod red. N.A.Sazonova. Minsk, Sel'khozgiz BSSR, 1962. 239 p. (MIRA 16:6)

1. Akademiya nauk Belorusskoy SSR (for Sazonov).
(Rural electrification)

SAGAL'CHIK, Beniamin Mordukhovich; BOROVIKOVA, R., red.

[Performance of the bucket of a backshoe on peat soils] Rabota kovsha obratnoi lopaty na torfianom grunte. Minsk, Gos.izd-vo sel'khoz. lit-ry BSSR, 1963. 37 p. (MIRA 17:7)

MATSEPURO, M.Ye. prof.; KATSYGIN, V.V., kand. tekhn. nauk; MAKAROVA, N.A., kand. tekhn. nauk; NOVICHIKHIN, V.A., kand.tekhn. nauk; YANUSHKEVICH, B.N., kand. tekhn. nauk; BOROVIKOVA, R., red.; REZNIK, T., red.; TIMOSHCHUK, R., tekhn. red.

[Problems of the technology of mechanized farm production] Voprosy tekhnologii mekhanizirovannogo sel'skokhoziaistvennogo proizvodstva. Minsk, Gos.izd-vo sel'khoz.lit-ry BSSR. Pt.1. 1963. 262 p. (MIRA 17:1)

1. TSentral'nyy nauchno-issledovatel'skiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva nechernozemnoy zony SSSR. 2. TSentral'nyy nauchno-issledovatel'skiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva nechernozemnoy zony SSSR (for Matsepuro, Katsygin, Makarova, Novichikhin, Yanushkevich).

LUPINOVICH, Ivan Stepanovich; BOKOVIKOVA, R., red.

[Role of the liming of soils in the improvement of their fertility] Rol' izvestkovaniia pochv v povyshenii ikh plodorodiia. Minsk, Izd-vo "Urozhai," 1964. 41 p.
(MIRA 17:7)

LARIN, V.D., red.; BOROVIKOVA, R.P., red.

[Papers from a session of the Division of Tillage, Land Improvement, and Crop Culture of the White Russian Academy of Agriculture, devoted to the 40th anniversary of the Great October Socialist Revolution (Mogilev, 1957)] Sbornik trudov sessii Otdeleniia zemledeliia, melioratsii i rastenievodstva Akademii sel'skokhoziaistvennykh nauk BSSR, posviashchennoi 40-letiiu Velikoi Oktiabr'skoi sotsialisticheskoi revoliutsii, g.Mogilev, 1957 g. Minsk, Redaktsionno-izdatel'skii otdel ASKhN BSSR, 1958. 231 p. (MIRA 13:8)

1. Gorki. (Mogilevskaya oblast') Belorusskaya akademiya sel'skogo khozyaystva.
(White Russia--Agriculture)

BABAYEV, S.G.; BOROVIKOVA, R.P., red.; ZUYKOVA, V.I., tekhred.

[Study of the operating indices of machinery units in the processing of peat-bog virgin soils] Issledovanie ekspluatatsionnykh pokazatelei agregatov pri obrabotke tselinnykh torfiano-bolotnykh pochv. Minsk, Izd-vo Akad.sel'khoz.nauk BSSR, 1959. 24 p. (MIRA 14:2)
(Peat bogs) (Peat machinery)

RUNTSO, Anatoliy Andreyevich; KATSYGIN, V.V., kand.tekhn.nauk, nauchnyy red.; BOROVIKOVA, R.P., red.; ZUYKOVA, V.I., tekhn.red.

[Investigating and establishing the principal parameters of general purpose plows] Issledovanie i obosnovanie osnovnykh parametrov plugov obshchego naznacheniia. Minsk, Izd-vo AS KhN BSSR, 1959. 50 p. (MIRA 14:1)
(Plows)

BOROVIKOVA, R.P. [translator]; DUBROVSKIY, G.B.[translator]; OKHOTIN, A.S. [translator]; PEDYASH, E.M. [translator]; MASLAKOVETS, Yu.P., prof., doktor fiz.-mat.nauk, red.; SUBASHIYEV, V.K., kand.fiz.-mat.nauk, red.; VISKOVA, M.V., red.; SMIRNOVA, N.I., tekhn.red.

[Semiconductor transformers of radiant energy] Poluprovodnikovye preobrazovateli energii izluchenii; sbornik statei. Moskva, Izd-vo inostr.lit-ry, 1959. 407 p. (MIRA 12:4)
(Semiconductors) (Photoelectricity)

... Borovikova, R.P.

S/170/60/003/008/005/014
B019/B054

AUTHORS: Baum, V. A., Borovikova, R. P., Okhotin, A. S.

TITLE: An Investigation of the Work of Photoelectric Cells With Intense Light Fluxes

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 8, pp. 47-52

TEXT: The authors report on an investigation of the work of silicon photoelectric cells with intense light fluxes. It is pointed out that the efficiency of photoelectric cells with intense light fluxes is considerably reduced by the temperature increase. It is known that this disadvantage can be avoided by cooling. Cheap silicon cells were used in the experiments described here. At the beginning, the authors discuss the modern theory of photoelectric cells, and deal particularly with the voltampere characteristics. Fig. 1 shows the experimentally determined voltampere characteristics of a photoelectric cell in light irradiation with a power of from 0.013 to 0.097 watt/cm^2. Fig. 2 shows the dependence of the output power of p-type silicon semiconductors on irradiation. It

Card 1/3

was shown that the power only increased up to about 0.5 watt/cm^2 with increasing irradiation, which is explained by the heating of the photoelectric cell. It was attempted to raise this upper limit of capacity by cooling the photoelectric cell by means of an experimental arrangement which allowed an irradiation of the cell up to 15 watt/cm^2. The diagram (Fig. 3) shows that the current of the photoelectric cell considerably increases with increasing irradiation, particularly with low load resistances. Fig. 4 shows the photocurrent as a function of irradiation and of load resistances; the good agreement with the results of an equation suggested by V. K. Subashiyev (Ref. 2) is pointed out here. Finally, the authors discuss the deviations of the optimum voltages of the photoelectric cell and of the optimum amperage from the theoretical values. The diagram (Fig. 5) representing the capacity increase of high- and low-resistance photoelectric cells as a function of increase in irradiation shows that the increase in output power of high-resistance cells is not particularly high whereas this increase in power is considerable in the case of low-resistance cells. There are 5 figures and 3 references: 2 Soviet and 1 US.

An Investigation of the Work of Photoelectric Cells With Intense Light Fluxes

S/170/60/003/008/005/014
B019/B054

ASSOCIATION: Energeticheskiy institut im. G. M. Krzhizhanovskogo, g. Moskva (Institute of Power Engineering imeni G. M. Krzhizhanovskiy, Moscow)

SUBMITTED: March 10, 1960

Card 3/3

PECHKUROV, A.F., kand.sel'skokhoz.nauk, glavnyy red.; ASKOCHENSKIY, N.A., red.; SHAROV, I.A., akademik, red.; SKOROPANOV, S.G., red.; RUSINOV, F.I., red.; BOROVIKOVA, R.P., red.; SOSINOVICH, A.I., tekhred.

[Drainage of bog and swampy soils of the non-Chernozem zone of the European U.S.S.R.; materials of the joint session, July 8-11, 1958] Osushenie bolotnykh i zabolochennykh pochv nechernozemnoi zony Evropeiskoi chasti SSSR; materialy ob"edinennoi sessii 8-11 iiulia 1958 g. Minsk, Izd-vo ASKhN BSSR, 1960. 364 p. (MIRA 14:4)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina. 2. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Sharov).

(Drainage)

MATSEPURO, M.Ye., prof., akademik, red.; YANUSHKEVICH, B.N., kand. tekhn. nauk, red.; BOROVIKOVA, R.P., red.; YERMILOV, V.M., tekhn. red.

[Problems of agricultural mechanics] Voprosy zemeledel'cheskoi mekhaniki. Pod red. M.E.Matsepuro i B.N.IAnushkevicha. Minsk, Gos. izd-vo sel'khoz. lit-ry BSSR. Vol.7. 1961. 291 p. (MIRA 15:1)

1. Akademiya sel'skahaspadarchykh navuk BSSR. Navukova-dasledchy instytut mekhanizatsyi i elektryfikatsyi sel'skai haspadarki. 2. Akademiya nauk BSSR (for Matsepuro).
(Agriculture) (Mechanics)

S/058/62/000/008/130/134
A160/A101

26.2420

AUTHOR: Borovikova, R. P.

TITLE: An investigation of silicon photocells at large concentrations of solar power

PERIODICAL: Referativnyy zhurnal, Fizika, no. 8, 1962, 44, abstract 8-3-87a (In collection: "Teploenergetika". No. 3, Moscow, AN SSSR, 1961, 152 - 156)

TEXT: The limiting operational conditions of silicon photocells operating with solar-power concentrators were determined. Formerly it was established that the output power of the silicon photocells increased 20 - 30 times, and that of single samples 70 times, when the incident luminous flux grew 100 - 150 times. When investigating the relation between the output power of the photocells without compulsory cooling - and the illuminance, it was determined that, at the beginning, their output power increased up to a maximum value at $\bar{q}$ = 0.3 - 0.5 watt/cm^2 and then decreased due to a heating of the photocells to 50°C and more. To eliminate the heating, the photocells were placed in a heat-exchanger and

Card 1/2

S/058/62/000/008/130/134
A160/A101

An investigation of silicon photocells at...

cooled by running water. According to the curve of the relation between the output power of the photoelements (cooled by running water) and the illuminance, the output power first quickly increased at an illuminance up to 4 - 5 watt/cm^2, and then the growth of the power ceased at a further increase of the illuminance. In some cases, the power decreased. An installation from water-cooled photobatteries with an area of 110 cm^2, provided with a mirror (diameter - 1.4 m) to be used as a solar-energy concentrator, was built. The output power of the photobattery was 0.42 watts at a normal illumination of 780 watt/m^2. The temperature field in the focal plane of the mirror was measured with the help of a thermocouple. The volt-ampere characteristics of the photobattery at two illuminancies of 4.3 and 5.4 watt/cm^2 are presented. There is 1 reference.

V. Shch.

[Abstracter's note: Complete translation]

Card 2/2

33953
S/665/61/000/003/017/018
E194/E420

26.1512

AUTHOR: Borovikova, R.P.

TITLE: An investigation of silicon photo cells with high concentration of solar energy

SOURCE: Akademiya nauk SSSR. Energeticheskiy institut. Teploenergetika, no.3, 1961. Poluprovodnikovyye preobrazovateli solnechnoy energii. 152-156

TEXT: Previous work has shown that when the light flux incident on silicon photo elements is increased by a factor of 100 to 150 the increase in output power was only by a factor of 20 to 30. The present work used the same method as that described in Ref.1 (Baum V.A., Borovikova, R.P., Okhotin A.S., IFZh, v.III, no.8, 1960) using silicon photo cells with efficiency ranging from 3 to 10% both with and without water cooling. In the case of uncooled cells, the output power rises with the illumination to reach a maximum value at an illumination of 0.3 to 0.5 W/cm^2 and then diminishes. For most of the units the output power was doubled when compared with the output at an illumination of 0.06 W/cm^2. The output is probably small because the units get hot. Attempts

Card 1/2

An investigation of silicon ...

to make measurements with an incident flux of 2 W/cm^2 gave an output of 0.8 mW/cm^2 and the cells were damaged by the heat. Water cooling was then tried with illuminations up to 20 - 25 W/cm^2. For all the units tested there is a rapid increase in output up to an illumination of 4 to 5 W/cm^2 but beyond this saturation was evident. Only one cell gave a power increase by a factor of 19, the remainder by only 5 to 8. A battery was then built with an area of 110 cm^2 cooled by flowing water and a reflector was used to concentrate the solar energy. The output power measured with normal illumination of 780 W/m^2 was 0.42 W. The mirror was made 1.4 m diameter to give an average incident radiation of 500 to 600 W. The volt-ampere characteristics were determined at two sunlight levels: 570 and 719 W/m^2 corresponding to 4.3 and 5.4 W/cm^2 respectively. In both cases the output power was 4.5 W, and so the battery was evidently saturated. The load used was a fan motor. There are 5 figures and 1 Soviet-bloc reference.

Card 2/2

CHUKHROV, M.V.; BOROVIKOVA, S.I.; SOKOLOVA, A.I.

Physical methods of grain refinement in light alloys. Issl. splav. tsvet. met. no.4:141-156 '63. (MIRA 16:8)

(Aluminum alloys--Metallography)
(Magnesium alloys--Metallography)
(Electromagnetic fields)

L 18023-66 EWP(e)/EWT(m)/EWP(j)/T/ETC(m)-6 WW/RM/WH
ACC NR: AP6006989 (A) SOURCE CODE: UR/0190/66/008/002/0363/0363

AUTHOR: Uskov, I. A.; Pelishenko, S. S.; Solomko, V. P.; Borovikova, S. M. 39 13

ORG: none

TITLE: Chemical grafting of polycaproamide to glass fiber 15,44,55

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 2, 1966, 363

TOPIC TAGS: nylon, graft copolymer, glass reinforced plastic

ABSTRACT: A study has been made of the graft polymerization of polycaprolactam to glass fiber. It is noted that glass fiber-reinforced polycaprolactams which have received widespread application, are usually prepared by introducing the fiber into the polymer melt. Introduction of the fiber into the polymerizing system was of great interest since a stronger fiber-binder interaction is thereby rendered possible. Chopped alkali-free glass fiber, 11 μ in diameter, nonlubricated or finished with AGM or chromolan coupling agent, was used. The resultant reinforced plastic had improved mechanical properties and lesser swelling in water and hence better service properties. Extraction proved that a considerable portion of the polycaprolactam is in fact grafted to the fiber. [SM]

SUB CODE: 11, 07/ SUBM DATE: 07Sep65/ ATD PRESS: 4212

Card 1/1 vmh UDC: 541.64+678.675

L 44581-66 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AP6015675 (A) SOURCE CODE: UR/0413/66/000/009/0077/0077

28
B

INVENTOR: Borovikova, S. M.; Lyakhovich, I. S.; L'vov, B. S.; Solov'yev, A. M.

ORG: none

TITLE: Preparation of glass fiber-filled thermoplastic resins. Class 39, No. 181296 [announced by the State Scientific Research Institute of Plastics (Gosudarstvennyy nauchno-issledovatel'skiy institut plasticheskikh mass)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 77

TOPIC TAGS: resin, thermoplastic resin, filler, glass fiber filler

ABSTRACT: This Author Certificate introduces a method for making glass-fiber-filled thermoplastic resins by introducing the filler into the resin melt prepared for the melting equipment. To simplify the process, the glass-fiber filler is introduced into the corner head of the melting

Card 1/2 UDC: 678.046.073:666.189.211

L 44581-66

ACC NR: AP6015675 O

tank or extrusion press. The glass-fiber filler is a bundle of basic, straight (not twisted) glass threads. [Translation] [LD]

SUB CODE: 11/ SUBM DATE: 18Nov63/

Card 2/2

BOROVIKOVA, T.N., assistent

New devices for studying the mechanical properties of textile materials. Tekst. prom. 23 no.6:69-71 Je '63.
(MIRA 16:7)

1. Kafedra avtomatiki Moskovskogo tekstil'nogo instituta (MTI).
(Textile fabrics--Testing)

NOVOSELOV, P.; BOROVIKOVA, V.

Issuing credit and the financing of the capital investments of consumers' cooperatives. Den. i kred. 21 no.7:61-68 Jl '63.
(MIRA 16:8)

(Cooperative societies--Finance)
(Construction industry--Finance)

BOROVIKOVA, Ye.G.

Reactivity of steroismetric crotonic acids and their esters. Trudy OTIPiKhP 9 no.2:107-111 '59. (MIRA 13:9)
(Crotonic acid)

PLETSITYY, D.F.; SHVAR, Ye.M.; MONAYENKOV, A.M.; BOROVIKOVA, Ye.P.; LABINSKAYA, A.S.

Comparative effectiveness of subcutaneous and intramuscular tetanus anatoxin injections in vaccination against tetanus. Zhur.mikrobiol. epid. i immun. 28 no.4:3-10 Ap '57. (MLRA 10:10)

1. Iz Instituta norml'noy i patologicheskoy fiziologii AMN SSSR i Krasnodarskoy krayevoy sanitarno-epidemiologicheskoy stantsii.
(TETANUS, prev. and control
vacc., comparison of effectiveness of subcutaneous and intramuscular inject.)

RATNER, A.V., kand. tekhn. nauk; MAZEL', R.Ye., kand. tekhn. nauk; LEONOVA, L.G., kand. tekhn. nauk; BOROVIN, G.K., inzh.

Design strength of joints welded by high-frequency currents. Teploenergetika 12 no.11:67-70 N '65. (MIRA 18:10)

1. Vsesoyuznyy teplotekhnicheskiy institut.

L 23197-66 EWT(d)/EWT(m)/EWP(w)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k) LJP(c) JD/HM/EM

ACC NR: AP6005891 SOURCE CODE: UR/0096/65/000/011/0067/0070

AUTHOR: Ratner, A. V. (Candidate of technical sciences); Mazel', R. Ye. (Candidate of technical sciences); Leonova, L. G. (Candidate of technical sciences); Borovin, G. K. (Engineer).

ORG: All-Union Heat Technology Institute (Vsesoyuznyy teplotekhnicheskiy institut)

TITLE: Construction strength of welded joints made with high frequency currents

SOURCE: Teploenergetika, no. 11, 1965, 67-70

TOPIC TAGS: welding technology, high frequency

ABSTRACT: Joints in tubes with a diameter of 25 x 3 mm, made of Steel 20, were used for the tests. The welding was done with high frequency currents as well as by the contact method. The high frequency welding was done under the following conditions: generator voltage-430 volts; power of generator-60 kilowatts; frequency-8,000 cycles. Shielding from oxidation was done with a gas consisting of 15% acetylene and 85% natural gas, fed at a rate of 1.5 liters/sec through the 25 x 3 mm tubes. During the heating, there was a gap of 1 mm between the ends of the tubes,

Card 1/2 UDC: 621.632.411.4

through which the gas flowed and covered the surfaces being welded. Within a few seconds the gap closed and deposition began. The optimum heating temperature depends on the oxidation shielding medium and, at a specific deposition pressure of from 4 to 6 kgf/mm^2, is from 1250 to 1280°C (that is, lower than the melting temperature of the steel). In the tests for resistance to thermal shock, samples of the welded joints were heated in an electric furnace and suddenly quenched in water. The samples were subjected to a metallographic investigation after tests at 780, 1500, 5112, and 10,062 cycles. The vibration resistance of the welded tube joints was studied in a special unit designed for simultaneous evaluation of the effect on construction strength of cyclic vibrations, internal pressure, and elevated temperatures. Test results are exhibited graphically and in tabular form. The general conclusion of the article is that welding with high frequency currents shows promise in welding heating surface tubes made of low carbon steel. Orig. art. has: 8 figures and 1 table.

SUB CODE: 11, 13/ SUBM DATE: none.

BOROVIN, N.S.

Progressive team of railroad workers. Avtom., telem. i sviaz' 2 no.7:30-31 Jl '58. (MIRA 11:6)

1. Starshiy inzhener-inspektor TSentral'nogo upravleniya signalizatsii i svyazi (TsShU) Ministerstva putey soobshcheniya.
(Railroads—Electric equipment—Maintenance and repair)

BOROVIN, S., inzh.; PAVLOV, G.

Lightweight concrete wall panels for industrial buildings. (MIRA 16:11)
Stroitel' 9 no.10:1-4 O '63.

BOROVINSKAYA, D.A.; GEL'MONT, Z.Ya.

Upper frequencies quartz filter using an overlapped T-network.
Elektrosviaz' 17 no.5:34-40 My '63. (MIRA 16:4)
(Electric filters) (Radio filters)

BOROVINSKAYA, L.B.

Some physical characteristics of basic soil varieties of the Caspian Terrace. Vest. Mosk. un. Ser. 6: Biol., pochv. 17 no.4:72-79 Jl-Ag '62. (MIRA 15:9)

1. Kafedra fiziki i melioratsii pochv Moskovskogo universiteta.
(Caspian Sea region—Soils)

BOROVINSKAYA, L.B.

Effect of forest belts changes in some features of light-colored Chestnut light loam soil. Vest. Mosk. un. Ser. 6: Biol., pochv. 18 no.4:69-79 Jl-Ag '63. (MIRA 16:12)

1. Kafedra fiziki i melioratsii pochv Moskovskogo universiteta.

BOROVINSKAYA, L.B.

Studying the seepage of the Volga-Don Canal by means of changing the potentials of a natural electric field. Pochvovedenie no.5:69-72 My '64. (MIRA 17:9)

1. Moskovskiy gosudarstvennyy universitet.

ARKHIPOVA, L.I.; BARABANSHCHIKOV, V.V.; BAKHVALOVA, Z.M.; BOROVINSKAYA, M.A.; GOLOVCHINER, I.Ye.; DZHAMGAROVA, P.G.; YEVDOKIMOV, S.V.; KABANOV, M.M.; KNYAZEVA, T.D.; KOBOZEVA, N.V.; KOLEGOV, N.I.; LOPOTKO, I.A.; NEGUREY, A.P.; POLYAKOVA, Z.P.; ROMM, S.Z.; SVETLICHNYY, V.A.; STRAKUN, I.M.; TYAGUN, V.N.; FREYDLIN, S.Ya., prof.

[Dispensary service for the urban population] Dispanserizatsiia gorodskogo naseleniia. Leningrad, Meditsina. 1964. 349 p. (MIRA 17:8)

BOROVINSKIY, A.I.

Method of closed separation of the lung in non-effective artificial pneumothorax. Prob.tuberk., Moskva no.2:48-51 Mr-Ap '50. (CIML 19:3)

1. Of Novosibirsk Oblast Scientific-Research Tuberculosis Institute (Director -- A.A.Letunova; Scientific Director -- Prof. S.Ye.Rabinovich).

BOROVINSKIY, A.I.

Intrapleural photography. Probl. tuberk., Moskva no.4:70-72 July-Aug. 1950. (CLML 20:1)

1. Of Novosibirsk Oblast Scientific-Research Tuberculosis Institute, Novosibirsk.

BOROVINSKIY, A.I.

Axillary approach in extrapleural pneumonolysis. Probl. tub. no.3:48-54. My-Je '54. (MLRA 7:11)

1. Iz Novosibirskogo oblastnogo nauchno-issledovatel'skogo tuberkuleznogo instituta (dir. zasluzhennyy vrach RSFSR A.G.Aminina, nauchnyy rukovoditel' prof. S.E.Rabinovich)
(COLLAPSE THERAPY,
pneumonolysis, extrapleural, axillary approach)

BOROVINSKIY, A.I.

Arm holder for operations on the side of the throax. Probl.tub. no.3:70-71 My-Je '55. (MLRA 8:8)

1. Iz Novosibirskogo oblastnogo nauchno-issledovatel'skogo tuberkuleznogo instituta (dir. zasluzhennyy vrach RSFSR A.G.Aminina).
(THORAX, surgery,
side of thorax, arm holder)
(APPARATUS AND INSTRUMENTS,
arm holder for surg. on side of thorax)

BOROVINSKIY, A. I.

Retractor for extrapleural pneumonolysis with an axillary approach. Probl.tub. 34 no.6 supplement:26-27 N-D '56. (MLRA 10:2)

1. Iz Novosibirskogo oblastnogo nauchno-issledovatel'skogo tuberkuleznogo instituta (dir. - zasluzhennyy vrach RSFSR A.G.Aminina)
(COLLAPSE THERAPY, apparatus and instruments,
retractor for extrapleural axillary pneumonolysis (Rus))

BOROVINSKIY, A.I.

Prolonged extrapleural tamponade with thoracoplasty in the treatment of patients with severe cavernous forms of pulmonary tuberculosis. Probl.tub. no.8:53-56 '61. (MIRA 15:5)

1. Iz Novosibirskogo instituta tuberkuleza (dir. -- kand.med.nauk R.K. Lonzinger, zam. dir. po nauchnoy chasti - prof. S.Ye. Rabinovich).

(TUBERCULOSIS)